Virology 2008

I- Write on the following:

a- Some virus families has VPg at 5 end of its genome.
Enumerate theses families, describe the physic-chemical properties of one family of them and discuss the antigenic characters of one of a virus has a segmented genome and infect birds related to another family.
b- Illustrate only the morphological structures of families in which gallid herpesvirus and rinderpest virus are related.
c- Enumrate methods used for viral DNA detectionand only draw in diagram one method of them.

II- Give an account on:

a- Virus transmitted by insects. Enumerate these virus families and write on the physic-chemical properties of a genus its capsid contain ring shaped capsomers also on type of vaccine used against a virus have segmented genome related into another family.
b- Nature of poxviridae genome and lab diagnosis of lumpy skin disease virus in cattle.
c- Viral proteins of avian influenza virus, infectious bronchitis virus and bovine viral diarrheal virus.

III- Describe the following:

a- You visited a poultry farms suffering from respiratory signs. Enumerate type of virus which may be inoculated and how can you differentiate between them by inoculation in embryonated chicken egg.
b- General properties and pathogenesis of the causative agent of bovine spongiform encephalopathy.
c- Laboratory diagnosis of the rabies virus in dogs and rabbit hemorrhagic disease virus.

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Virology 2009

I- Write on the following (with a diagram for a & b):

a- morphology of a family in which nested set of subgenomic mRNAs are transcripted.
b- genomic organization and encoded proteins of a family has a bullet shape.
c- lab diagnosis of a virus infect birds causing curling and dwarfing in embryonated chicken egg.
d- unique features of G.obrivirus.

II- Give short notes on (with a diagram of a & b):

a- morphology of a family has affinity to mucus and segmented genome.
b- genomic organization and encoded proteins of a family has a tegument protein in its structure.
c- lab diagnosis of a virus infect rabbits related to family its capsid has 32 cup shaped depressions.
d- type of antigens and serotypes of infectious bursal disease virus, marelds disease virus and FMD virus.

II- Discuss the following (with a diagram of a, b & c):

a- morphology of a family contains lateral bodies in its structure.
b- genomic organization and encoded proteins of a family its envelope has fusion protein.
c- a method used to amplify and identify viral RNA.
d- structure of the causative agent causing spongiform in brain and how you can diagnose its disease in cattle.
e- lab diagnosis of a virus infect cattle causing immunosuppression and not produce CPE in tissue culture.

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Virology 2010

I- Describe The Following:

1- morphological structure of the following:
   a- virus family produce negri bodies
   b- virus family show genomic isomers
   c- virus family has 2-3 capsid layers

2- lab.diagnosis of sheep poxvirus in sheep and infectious bronchitis virus in birds.

3- causative agent of bovine spongiform encephalopathy.

II- Explain the following:

1- genomic organization and proteins expression of the following:

   a- enveloped virus family its genome is ssRNA negative sense with 6-8 segments.
   b- naked virus family has one capsid layer and its genome is segmented dsRNA
   c- enveloped virus family its genome is ssRNA negative sense and its cap snatching occure in the cell cytoplasm.

2- mention virus spp subfamily family and order in which G.tremovirus G.MARDIVIRUS and G.aulavirus are related.

III- Discuss The Following:

1- enumerate virus families transmitted through arthopods and explain properties of G.Obrivirus.
2- draw a diagram to follow up a virus related to G.Lyssavirus from site of its bite until its excretion.
3- virus antigenicity and serotype of foot and mouth disease virus and bovine virus diarrhea virus.

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Virology 2011

1- write on general properties of the causative agent of bovine spongiform encephalopathy (mad cow disease) in cattle.

2- some virus families have genome of +ve sense, ssRNA, enumerate these families, how you can diagnose a virus related to G.pestivirus, its 3' end not polyadenylated and causing immunosuppression in cattle.

3- some viruses have more than one serotypes, enumerate these viruses and discuss antigenicity and serotypes of Gallid herpes virus-2

4- fusion (F) protein is a part of a virus family envelop what this family and discuss its classification and how you can diagnose Newcastle disease virus (NDV) in lab.

5- compare between street and fixed virus types of rabies virus.

6- lateral bodies is a part of ds DNA virus family, illustrate the virus structure of this family and how you can diagnose and vaccinate against a virus infect sheep related to G. Capripoxvirus.

7- cap snatching occur in some virus families replication, enumerate these families and illustrate genome organization of one family of ambisense genome and write on antigenic drift and shift of another family.

8- some virus families contain segmented genome, enumerate these families and illustrate genome organization of a virus family both 5' ends contain Vpg and the virus proteins of another virus family has 10 segments with ring shaped capsid.

9- enumerate methods of virus nucleic acid detection and explain restriction fragment length polymorphism (RFLP) method.

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Mansoura University
Faculty of veterinary medicine
Department of virology

19/6/2012
Time: Two hours

Virology exam., third year
(Second semester)

All questions to be answered with a diagram if possible : (25 marks)

1- Give an account on: **(8 marks)**

a) Similarities and differences between Picornaviridae and Caliciviridae with a diagram for virus genome organization of these families.

b) Morphology and genome organization of a virus family causing Negri bodies in virus infected cells.

c) Types of vaccines against bovine virus diarrhea virus (BVDV), infectious laryngotracheitis virus (ILTV) and Rift valley fever virus (RVFV).

2- Write on the following: **(8marks)**

a) Similarities and differences between Orthomyxoviridae and Paramyxoviridae with a diagram for virus morphology of these families.

b) General properties of a virus family, its envelope is loosely attached to capsid, one of arboviruses, its genome is +ve sense ssRNA, capped and polyadenylated.

c) Serotypes in animals and birds viruses and the antigenicity of one of them infect cattle.

3- Discus the following: **(9 marks)**

a) Similarities and differences between Reoviridae and Birnaviridae with a diagram for virus morphology and genome organization of these families.

b) Lab. diagnosis of Newcastle disease virus (NDV), lumpy skin disease virus (LSDV) and infectious bronchitis virus (IBV).

c) General properties of causative agent of mad cow disease of cattle.

d) Restriction fragment length polymorphism (RFLP) could be used to detect mutations in viruses.

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Virology 2013

Al questions to be answer with a diagram:

A) Write on the following :

1- Structure and genomic organization of Rhabdoviridae.
2- Nomenclatues of avian influenza virus and lab. diagnosis of it.
3- Comparative between Picornaviridae and Calicivirirdae.
4- Comapartive between Togoviridae and Flaviviridae.

B) Discuss the following:

1- Morphology of Coronaviridae and lab. diagnosis of bronchitis virus. infection
2- Comparative between Orthomyxoviridae and Paramyxoviridae.
3- genomic organization of infectious bursal diseas virus and Bunyaviridae.

C) Explain the following:

1- Comparative between subfamilies of Herpesviridae.
2- Unique feature of Orbivirus and lab. diagnosis of blue tongue virus.
3- Lab. diagnosis of lumpy skin disease virus and properties of infected prion.

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Mansoura University
Faculty of Veterinary Medicine
Department of virology

Date: 1/6/2014
Time: Two hours

Virology exam ., third year
(second Semester)

All questions to be answered with a diagram if possible : (25 marks)

I- Give an account on: (8 marks)

A) Morphology and structure of a virus family that its genome is linear , single stranded RNA , (-) sense and its viruses produce Negri bodies in virus infected cells .
B) Morphology and structure of a virus family that its genome is dsDNA and the tegument is unique criterion in its structure .
C) Lab. diagnosis of sheep pox virus in infected sheep **or** Gallid herpesvirus -2 in birds .
D) Antigenicity and serotypes of foot and mouth disease virus . .

II- Write on the following: (8 marks)

A) Morphology and structure of a genus that its genome is dsRNA , segmented (10 segments) and its capsid contains 2-3 layers .
B) Morphology and structure of a virus family that its genome is single stranded RNA , (-) sense, segmented (6-8 segments) and its envelope contains HA and NA peplomers (glycoproteins) .
C) Lab. diagnosis of Rift Valley fever virus in sheep **or** infectious bursal disease virus in birds.
D) Antigenicity and serotypes of blue tongue virus .

III- Discus the following: (9 marks)

A) Physico chemical properties and structure of the causative agent of mad cow disease .
B) Compare between the genome organization **only** of picornaviridae and caliciviridae also between Togaviridae and Flaviviridae .
C) The types of vaccines used against Newcastle disease virus and bovine virus diarrhea virus .
D) The name of genus , subfamily , family and order of the following viruses :-
Gallid herpesvirus -1 , infectious bronchitis virus , duck hepatitis virus and avian influenza virus .

Good Luck
Prof. Dr. Ali El-Kenawy

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